ABSTRACT OF THE DISCLOSURE

A process of producing a polymer by aqueous solution polymerization with good productivity without causing the formation of noxious gases or the formation of impurities due to the noxious gases, or without any danger of foaming and the like is disclosed. The process includes subjecting a monomer to aqueous solution polymerization while controlling the temperature using at least one device of an external circulation device and an internal coil device each having heat exchanging function.